

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 17-25 are presently active in this case, Claims 17, 18, 21, 22, 24, and 25 having been amended by way of the present Amendment.

In the outstanding Official Action, Claims 19-20 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Official Action concludes that the phrase "strand formed of filaments" is unclear, because a strand has been described as being either continuous or non-continuous. The Official Action comes to this conclusion based upon the assumption that the term "'filament' connotes continuous fibers." The Applicant respectfully disagrees with the assumption that the term "filament" is defined as a continuous fiber(s). The Applicant notes that Webster's II, New College Dictionary (1995) defines the term "strand" as "1. Fibers or filaments twisted together so as to form a cable, rope, thread, or yarn. 2. A single filament, as a fiber or thread." Clearly, the phrase "strand formed of filaments" is accepted terminology, as it is identical to the terminology used in the dictionary definition. Webster's II, New College Dictionary (1995) defines the term "filament" as "1. A fine or thinly spun thread, fiber, or wire." The term filament connotes an initially formed element with a very thin diameter or width compared to the length thereof. For example, filaments forming glass strands in the reinforcement field typically have a diameter of a few micrometers for a length that is comparatively much greater, e.g., 1 mm. and larger. The filaments can be gathered to form strands in a twisted manner or without

twisting. And the strands can be cut or uncut, thereby forming non-continuous strands or continuous strands, respectively. However, even a non-continuous strand is formed from filaments (i.e., elements satisfying the definitions provided above for a filament). Neither the definition of the term "strand," nor the definition of the term "filament" limits these terms to a continuous configuration.

Additionally, the language in column 1, lines 26-35, of the Bolen et al. reference is not inconsistent with the terms used in the present application. The paragraph referred to in the Bolen et al. reference describes three different types of mats, namely, (1) mats composed of short fibers held together by a binder, (2) mats of bonded webs of chopped fibrous glass strands, and (3) mats of bundles or strands of continuous glass filaments. The sentence indicating that "[s]trands of filaments have superior strength because of the continuous nature of the filaments and their concentrated linear association in strand form" is referring to the preceding sentence regarding "strands of continuous glass filaments" of the third type of mat, as is apparent from the context of this statement. This sentence does not state or suggest that all filaments are continuous, and such a statement would be contrary to the definition provided in the Webster's II, New College Dictionary. The Bolen et al. reference even discusses a process in which filaments are gathered into strands (col. 1, lines 12-17) and mats formed of chopped strands or continuous strands (col. 1, lines 58-59). The usage of these terms in this manner is not unclear or indefinite in any manner.

Accordingly, the Applicant respectfully requests the withdrawal of the indefiniteness rejection.

Claims 22 and 23 were rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention. The Applicant respectfully traverses this rejection. Regarding Claim 22, the specification provides support for the limitation at issue at page 8, lines 3-18, and more generally, at page 9, line 39, through page 11, line 33. (See also, feature 11 in Figure 1 and the corresponding discussion in the specification.) Regarding Claim 23, the specification provides support for the limitation at issue at page 9, line 39, through page 11, line 33. (See also features 19 and 20 in Figure 1 and the corresponding description in the specification.) Accordingly, the Applicant respectfully requests the withdrawal of the enablement rejection.

Claims 17-22, 24, and 25 were rejected under 35 U.S.C. 102(b) as being anticipated by Bolen et al. (U.S. Patent No. 3,936,558). Claim 23 was rejected under 35 U.S.C. 103(a) as being unpatentable over the Bolen et al. reference. For the reasons discussed below, the Applicant requests the withdrawal of the art rejections.

Independent Claims 17 and 21 of the present application each recite a mat comprising at least one first layer of at least one strand formed of filaments that are at least partly opened by subjecting the at least one first layer to a flow of fluid, and at least one second layer of at least one strand formed of filaments, wherein the at least partly opened at least one first layer and the at least one second layer are superposed.

Claims 17, 18, 21, 22, 24, and 25 recite a mat comprising, among other features, at least one first layer of at least one strand formed of filaments that are at least partly opened, and at least one second layer of at least one intact strand formed of filaments that are not

opened. The Applicant submits that the Bolen et al. reference does not teach or suggest such a mat.

The Bolen et al. reference describes a fibrous body that includes at least two layers of strands of continuous filaments and binder particles in each layer. The fibrous body is formed by laying down layers of groups (58) of strands (28) on a conveyer (61). Figure 5 depicts a mat (60) that incorporates upper and lower surface layers (80) of light strands and a central body portion (82) of heavier strands. The mat (60) leaves the strand deposition position area and is conducted through a binder application area. At a first liquid impingement or flooding station (170), a liquid suspension material (174) is distributed evenly across the mat-like collection of strands. A second liquid impingement station (180) is spaced a distance from the first impingement and flooding station (170).

In the Bolen et al. reference, all of the layers of strands are provided onto the conveyer (61), and then binder is applied to all the layers. Accordingly, all of the layers of strands are subject to opening, regardless of whether the opening of any individual layer is subject to an opening to a different degree than any other layer. To the contrary, the present invention advantageously provides at least one first layer of at least one strand formed of filaments that are at least partly opened, and at least one second layer of at least one intact strand formed of filaments that are not opened. Such a configuration is not taught or suggested by the Bolen et al. reference.

The Applicant submits that since the Bolen et al. reference does not teach all of the limitations recited in Claims 17, 18, 21, 22, 24, and 25, then these claims are not anticipated

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by the Bolen et al. reference. Accordingly, the Applicant requests the withdrawal of the anticipation rejection of Claims 17, 18, 21, 22, 24, and 25.


Claims 19 and 20 are considered allowable for the reasons advanced for Claim 18 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed, taught, nor suggested by the applied references when those features are considered within the context of Claim 18.

Claim 23 is considered allowable for the reasons advanced for Claim 22 from which it depends. This claim is further considered allowable as it recites other features of the invention that are neither disclosed, taught, nor suggested by the applied references when those features are considered within the context of Claim 22.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

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